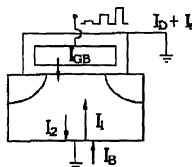


Replacement sheet

• Charge Pumping (CP) Setup



- $I_3 = I_1 - I_2$
= Recombination Current
= CP Current (I_{CP})
- I_{GB} = Gate-Bulk Leakage

Fig. 1a

Replacement sheet

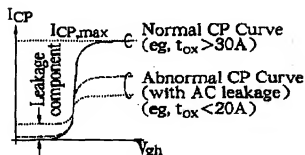
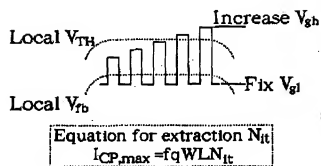


Fig. 1b

Replacement sheet

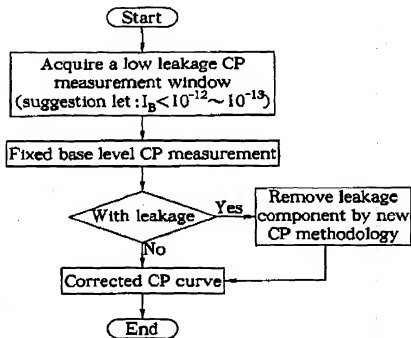


Fig. 1c

Replacement sheet

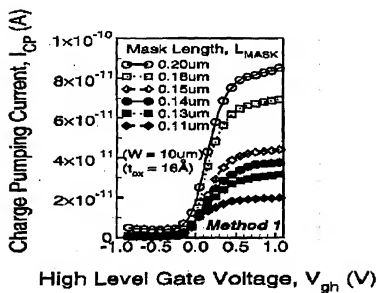


Fig. 3

Replacement sheet

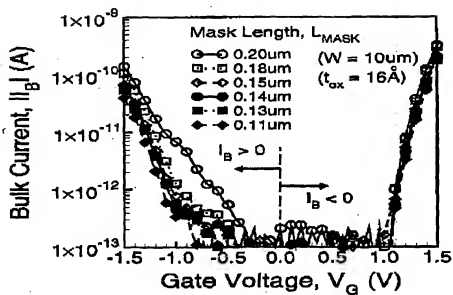


Fig. 4

Replacement sheet

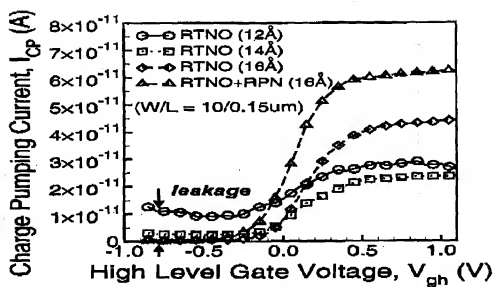


Fig. 5

Replacement sheet

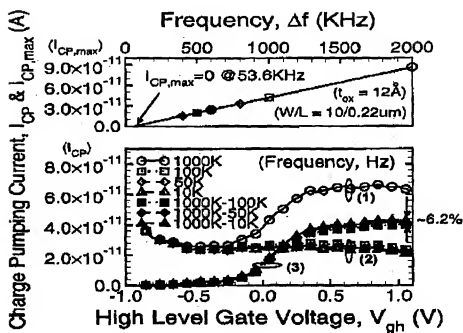


Fig. 6

Replacement sheet

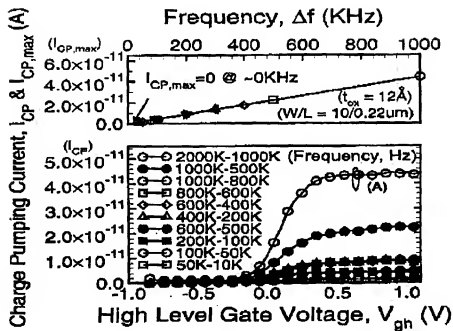


Fig. 7

Replacement sheet

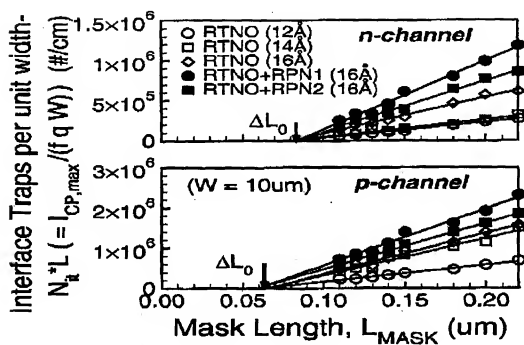


Fig. 9

Replacement sheet

$$(1a) \quad L_{WASK} = L_{gate} + 2 * \frac{\Delta L_1}{2} = L_{gate} + \Delta L_1$$

$$(1b) \quad L_{gate} = L_{off} + 2 * \frac{\Delta L_2}{2} = L_{off} + \Delta L_2$$

$$(1c) \quad \Delta L_0 = \Delta L_1 + \Delta L_2$$

$$(2a) \quad N_{s,1,totd} = N_{s,11} + N_{s,12}$$

$$(2b) \quad N_{s,2,totd} = N_{s,21} + N_{s,22}$$

$$(2c) \quad \Delta I_{CP,max} \propto \Delta N_{s,totd} = N_{s,1,totd} - N_{s,2,totd}$$

$$= (N_{s,11} + N_{s,12}) - (N_{s,21} + N_{s,22})$$

$$(\text{ if } N_{11,1} = N_{11,21})$$

$$= N_{s,12} - N_{s,22} \propto \Delta L$$

Table 1

Fig. 10

Annotated sheet showing changes

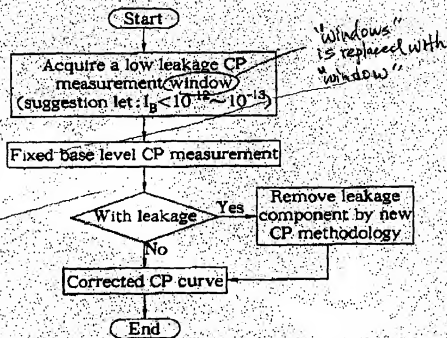


Fig. 1c

Annotated sheet showing changes

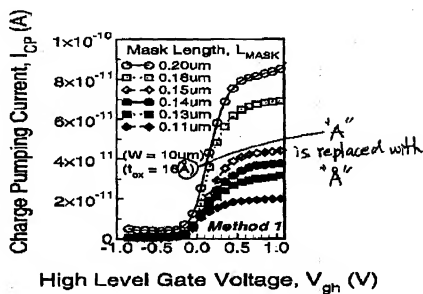


Fig. 3

Annotated sheet showing changes

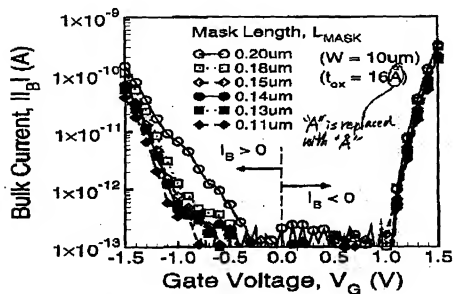


Fig. 4

Annotated sheet showing changes

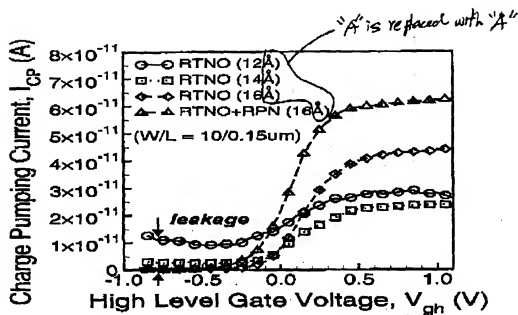


Fig. 5

Annotated sheet showing changes

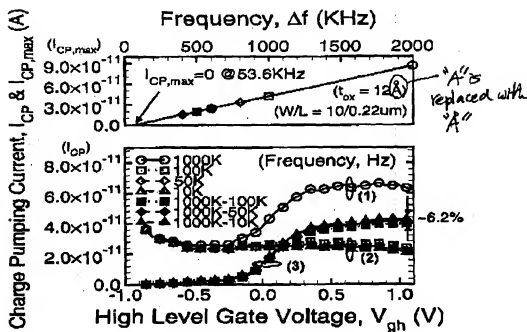


Fig. 6

Annotated sheet showing changes

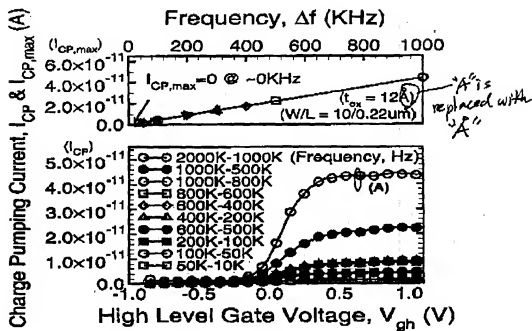


Fig. 7

Annotated sheet showing changes

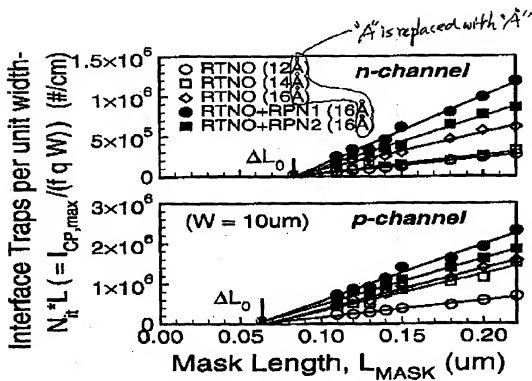


Fig. 9